

Running a Mega Project

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世界の幸せをカタチにする。

Creating Peace & Happiness for the World



Musashino University

“We choose to go to the Moon”

John F. Kennedy

September 12, 1962

Kennedy's goal was realized posthumously, on July 20, 1969, with the Apollo program's successful Apollo 11 mission.

Ignorance & Knowledge

- “We are scared of the unknown”
- “Our greatest enemy today is ignorance”
- “What you know is much less than what you do not know.”

International Collaboration Projects

(NLP Foundation)

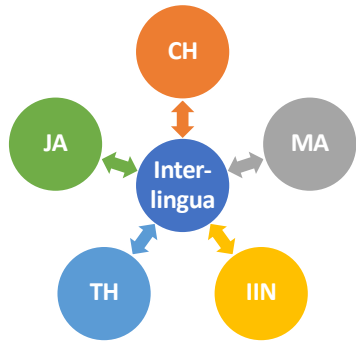
METI	• Multilingual Machine Translation (MMT) 1986-1994 (1995-1996)
UNU	• Universal Networking Language (UNL) 1999-2006
METI	• Asia Open Source (AOSS) 2003-2010
NICT	• Thai Computational Linguistic Lab (TCL) 2003-2019

METI : Ministry of Economy, Trade and Industry
UNU : United Nations University
NICT : National Institute of Information and Communications

Flagship projects in Thailand

• Lexitron 1995 • Parsit 1995 • Orchid POS tagged corpus 1997	NECTEC
• LinuxTLE 2000 • OfficeTLE 2000 • Sansarn 2001	NECTEC
• Digitized Thailand 2009-2013	NECTEC/MOC
• Elderly care 2017-2021 • AI City 2021-2023	TU/TSR

NECTEC : National Electronics and Computer Technology Center
MOC : Ministry of Culture
TU : Thammasat University
TSR : Thailand Science Research and Innovation Fundamental Fund



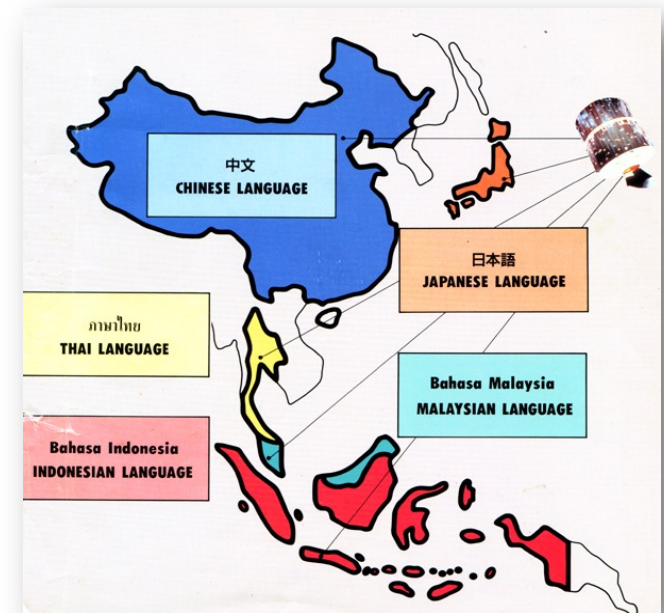
Multi-lingual Machine Translation

• Multilingual Machine Translation project

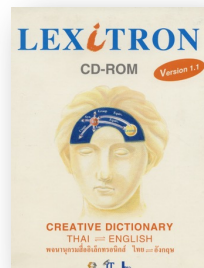
- Interlingual
- Thai, Japanese, Indonesian, Malaysian, Chinese
- CICC, Ministry of International Trade and Trade (MITI)
- 1986-1994 (1995-1996)

• Achievement

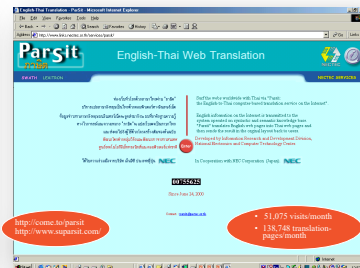
- ParSit, 1995
- Lexitron, 1995
- Orchid POS Tagged Corpus, 1997
- Vaja, 1998
- LinuxTLE, 2000
- Sansarn, 2001
- ++



Dictionary



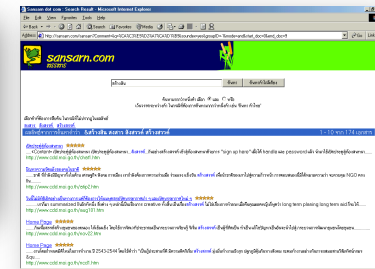
Machine Translation

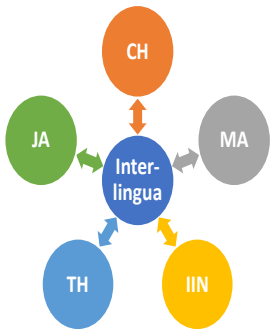


Linux, OpenOffice



Search Engine





Multi-lingual Machine Translation

• Multilingual Machine Translation project

- Interlingua
- Thai, Japanese, Indonesian, Malaysian, Chinese
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- 1986-1994 (1995-1996)

• Achievement

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- Vaja, 1998
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- Sansarn, 2001
- ++



Project Success Factor

- Ignorance breakthrough topic
> Machine Translation
- International collaboration
> CIMJT
- Multi-disciplinary
> NLP, Linguistics
- Core technology
> Interlingua
- Spin-off or Institutionalization
> Dictionary, Corpus, Web-based translation, Search engine, ...

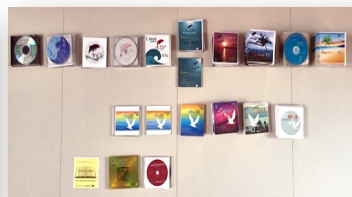
Dictionary



Machine Translation



Linux, OpenOffice



Search Engine



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Digitization

Digitized Thailand:

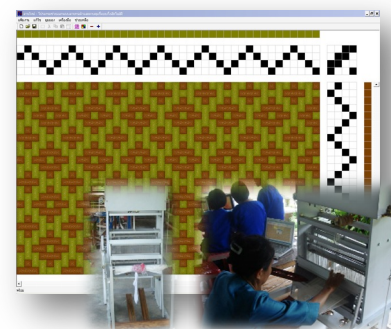
Building up National Digital Platform 2009 - 2013

<http://www digitized-thailand.org>

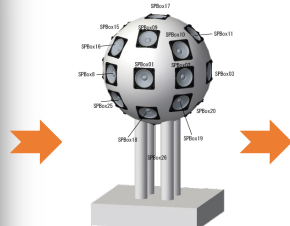
Costume design / Performing arts



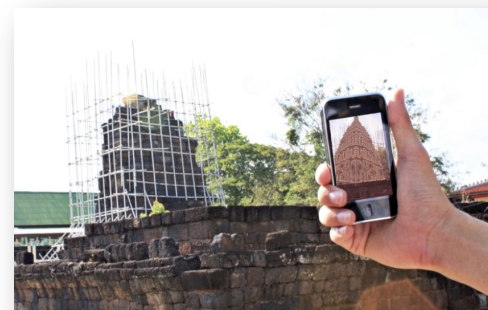
Weaving pattern



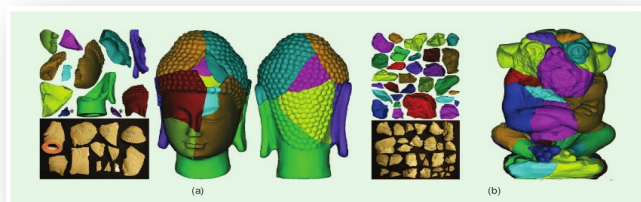
3D Music



AR



Pottery Scrap



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Digitization

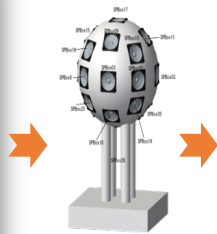
Digitized Thailand:

Building up National Digital Platform 2009 - 2013

<http://www.digitized-thailand.org>



3D Music



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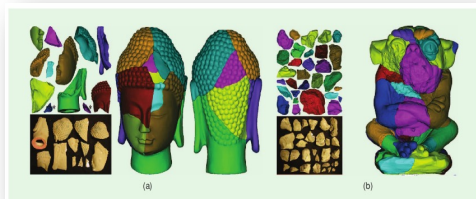
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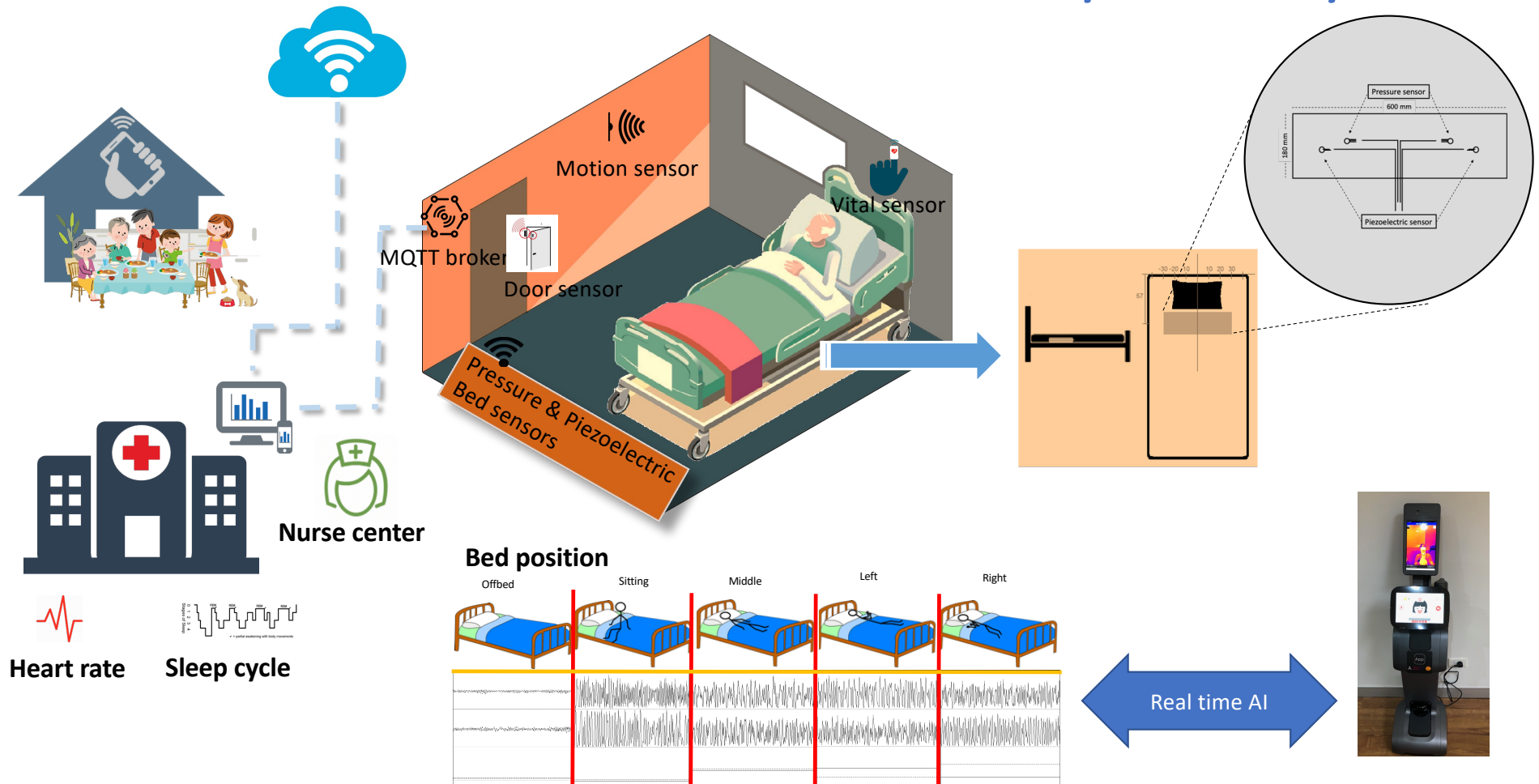


Project Success Factor

- Ignorance breakthrough topic
> Culture Digitization
- International collaboration
> Thailand, Japan
- Multi-disciplinary
> NLP, AI, Intangible Cultural Heritage, Local Wisdom, Tourism
- Core technology
> Knowledge representation, Human interaction, Digital platform
- Spin-off or Institutionalization
> Cultural database, Digital Museum

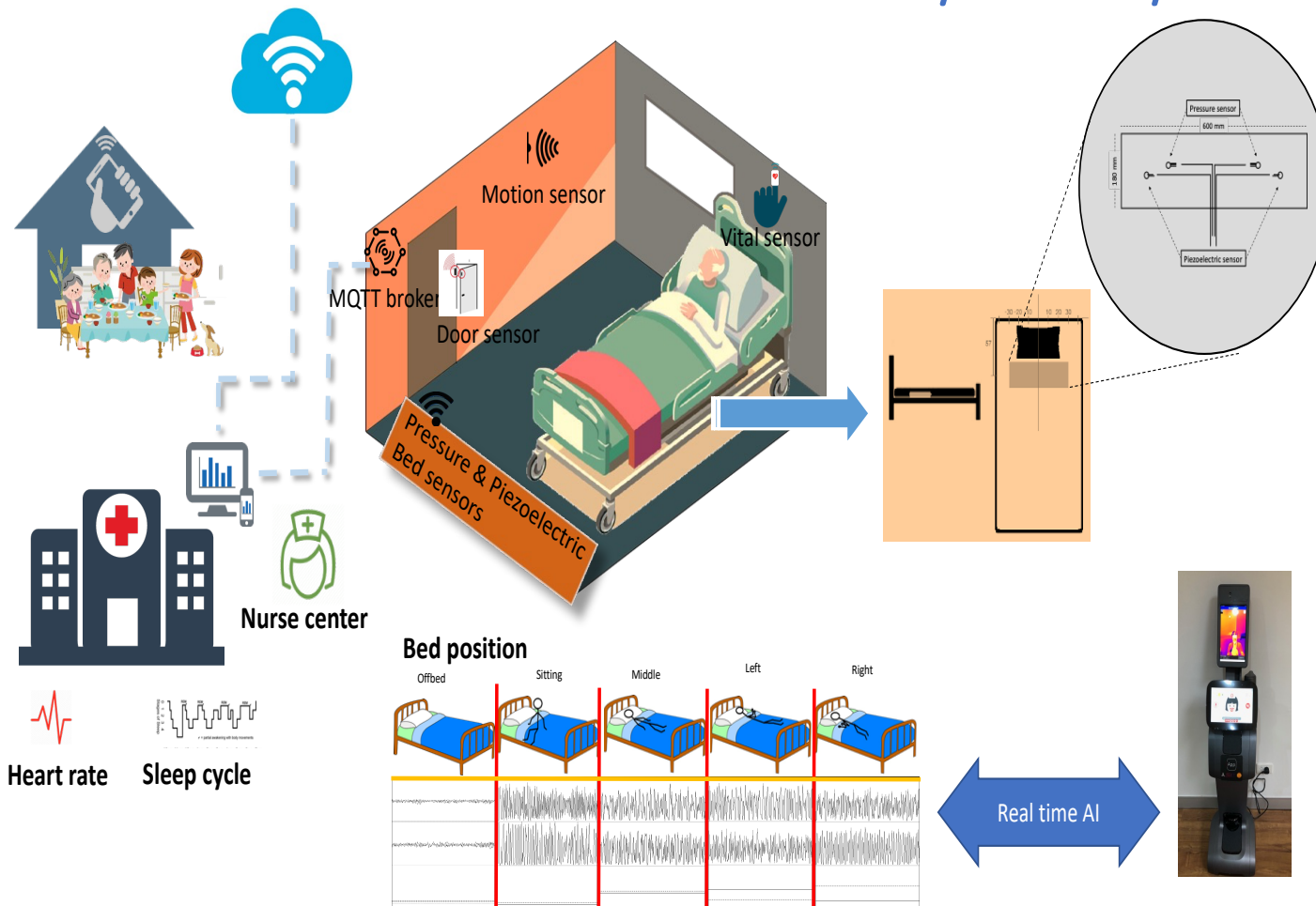
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Bed Sensor for Elderly Care System



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Bed Sensor for Elderly Care System



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Project Success Factor

- Ignorance breakthrough topic
> AI for Elder care
- International collaboration
> Thailand, Japan
- Multi-disciplinary
> AI, Nursing care
- Core technology
> Machine Learning, AI
- Spin-off or Institutionalization
> Bed sensor

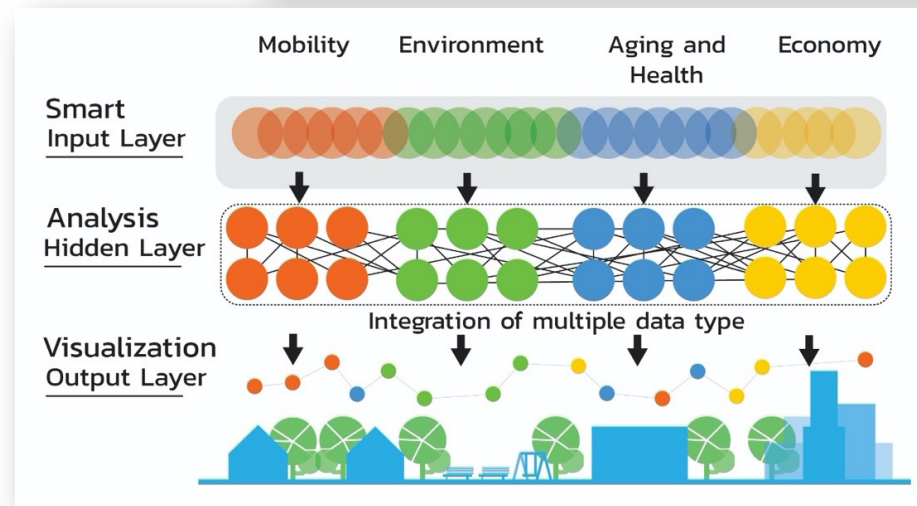
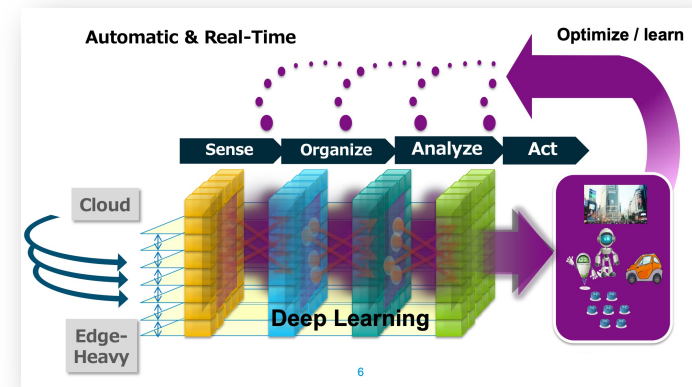
INFRASTRUCTURE

Deep Intelligent IoT

AI City :

City of Opportunity for
AI literacy and business

- Autonomous and Real Time
- Integration of multiple data type
- Global analysis, data center
- Community Learning & sharing knowledge
- Entire Network is connected as Deep Neural Net
- Generalized deep learning model solves multiple tasks



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Nobuyuki Ota, "Create Deep Intelligence™ in the Internet of Things", 2014, <http://on-demand.gputechconf.com/gtc/2015/presentation/S5813-Nobuyuki-Ota.pdf>

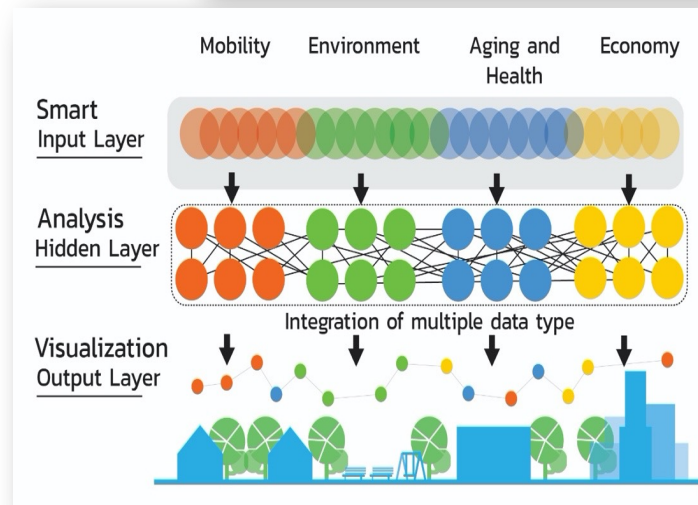
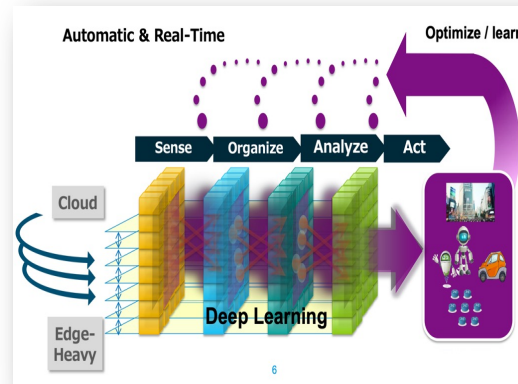
INFRASTRUCTURE

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Project Success Factor

- Ignorance breakthrough topic
> AI City Architecture
- International collaboration
> Thailand, Japan
- Multi-disciplinary
> AI, NLP, Smart city, Health care
- Core technology
> Machine Learning, AI, NLP, Data Science
- Spin-off or Institutionalization
> Thammasat Ai City

Project Value Proposition

- Ignorance breakthrough topic
- International collaboration
- Multi-disciplinary
- Core technology
- Possibility of Spin-off
or Institutionalization